

# INTERNATIONAL SEARCH REPORT

International Application No  
PCT/JP2004/011429

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 F01N3/10 B01D53/34 B01J23/63 B01J21/06

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 F01N B01D B01J

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 0 988 890 A (DAIHATSU MOTOR CO LTD) 29 March 2000 (2000-03-29) comparative examples 2-3 examples 1-3 claims 1-3 paragraph '0020!	3-12
X	EP 1 166 855 A (ICT CO LTD ; INTERNAT CATALYST TECHNOLOGY I (US)) 2 January 2002 (2002-01-02) examples 9-12 comparative examples 3, 3', 5 claim 1 ----- -/--	3-12

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

### \* Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- "&" document member of the same patent family

Date of the actual completion of the international search

2 November 2004

Date of mailing of the international search report

19/11/2004

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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 1 214 967 A (ICT CO LTD ; INTERNAT CATALYST TECHNOLOGY I (US)) 19 June 2002 (2002-06-19) examples 1-7; table 2 comparative examples 1-7 claim 1	3-12
X	----- US 6 335 305 B1 (MORIKAWA AKIRA ET AL) 1 January 2002 (2002-01-01) claims 1,6 examples 1-9,13; tables 1,2 comparative example 5 column 13, line 25 - line 27 -----	3-12

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Patent document cited in search report		Publication date	Patent family member(s)	Publication date
EP 0988890	A	29-03-2000	JP 3556839 B2	25-08-2004
			JP 2000072447 A	07-03-2000
			JP 3538034 B2	14-06-2004
			JP 2000072437 A	07-03-2000
			JP 2000167404 A	20-06-2000
			EP 0988890 A2	29-03-2000
			KR 2000017607 A	25-03-2000
			US 6576200 B1	10-06-2003
EP 1166855	A	02-01-2002	CA 2351754 A1	27-12-2001
			EP 1166855 A1	02-01-2002
			JP 2002079053 A	19-03-2002
			US 2002015674 A1	07-02-2002
EP 1214967	A	19-06-2002	JP 2002177781 A	25-06-2002
			CA 2364788 A1	12-06-2002
			EP 1214967 A2	19-06-2002
			US 2002107141 A1	08-08-2002
			ZA 200109992 A	27-06-2002
US 6335305	B1	01-01-2002	JP 3265534 B2	11-03-2002
			JP 2000271480 A	03-10-2000
			DE 60011153 D1	08-07-2004
			EP 1020216 A1	19-07-2000

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### Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☒ Claims Nos.: 1-2, 13-14  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:  
see FURTHER INFORMATION sheet PCT/ISA/210
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

### Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

#### Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

## FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box II.2

Claims Nos.: 1-2,13-14

In the claims 1-2,13-14 the ratio "oxygen sorbing amount / heat capacity value" has been used.

The use of this parameter in the present context is considered to lead to a lack of clarity within the meaning of Article 6 PCT. Because this parameter is completely unusual in the present field it is impossible to compare this parameters with what is set out in the prior art. Furthermore it is completely unclear what is meant in claims 1 and 13 by the statement "a value of an oxygen sorbing amount with respect to a heat capacity"

The lack of clarity is such as to render a meaningful complete search impossible. Consequently, the search has been restricted to claims 3-12

The applicant's attention is drawn to the fact that claims relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure. If the application proceeds into the regional phase before the EPO, the applicant is reminded that a search may be carried out during examination before the EPO (see EPO Guideline C-VI, 8.5), should the problems which led to the Article 17(2) declaration be overcome.